

# Does Board Supervisory Quality Enhance Corporate Social Performance?-Evidence from Taiwanese Listed Firms

Yaying Mary Chou Yeh (Corresponding author)

Associate Professor

Department of Accounting, National Dong Hwa University

No. 1, Sec. 2, Da Hsueh Rd., Shoufeng, Hualien 97401, Taiwan, R.O.C.

Tel: 886-3-8633075 E-mail: marychou@mail.ndhu.edu.tw

Wen-Chi Hsieh

Auditor, Audit Department, Deloitte & Touche in Taiwan

First Fl., No. 65, Minzu 5th St., Xizhi Dist., New Taipei City 221, Taiwan, ROC

Authors' short bio:

Yaying Mary Chou Yeh, DBA, CPA, is the Dean and an Associated Professor of Department of Accounting, National Dong Hwa University and teaches Financial Accounting, Advanced Auditing, Accounting Information System and Financial Reporting and Analysis. She received her doctoral degree from Nova Southeastern University, USA. Her research areas include financial accounting, corporate governance and financial reporting. Her research papers have been published at Journal of Business Research, Total Quality Management & Business Excellence, Asia Pacific Journal of Accounting and Economics and other peer-reviewed journals.

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## Abstract

This study uses Taiwanese public firms as a sample to examine if board supervisory quality enhances CSP. The present study uses four proxies for supervisory quality of board at group level: board meeting attendance rate, number of board meetings, social capital of the board and average training hours of directors. We obtain 348 CSR data from an international CSR rating agent and match them with double size non-CSR firms. We find that CSR firms exhibit

significantly higher board attendance rate, board meeting frequency and board social capital than non-CSR firms. For CSR firms, board attendance rate and board meeting frequency positively impact CSR ratings, implying that board diligence is essential to monitoring management to achieve higher social objectives. However, board social capital and training significantly but negatively impact CSP, implying busy board and inexperienced board detracts CSP.

Board success in CSR means directors must be passionate about the issues on CSR. Additionally, firms that are behind social agenda need to recruit resourceful directors to diversify information base for advises about stakeholder issues and trends. Firms that have taken steps in CSR activities should not recruit overly busy directors or inexperienced directors. Our paper provides both theoretical and practical implications.

**Keywords:** supervisory quality of board, corporate social responsibility, corporate social performance

## Introduction

The concept of corporate social responsibility (CSR) is widely accepted in advanced economies. Enlightened firms with their own ethical traditions, along with the promotion by government legislation and regulatory institution, have laid down good foundations and development in CSR guidelines and practices. The abstract concept of CSR has been transformed into a long list of corporate practices in developed countries, such as environmental management systems, eco-friendly and safe products, labor protection and welfare plans, corporate philanthropy and community development projects, and corporate social and environmental performance disclosure.

Firms from Asian countries, however, have low CSR awareness both on the corporate and state level (CLSA, 2014). There are limited CSR practices except for minority firms with global operations (Ip, 2008). Recent cases of corporate failures highlight the need for firms involving social responsible activities to gain the legitimacy to operate (Mallin & Michelon, 2011). Internal and external pressure forces businesses to fulfill social goals (Davies, 2003). This raises a serious question on how to form ethic leadership to promote corporate social performance (CSP) in Asian emerging markets. The question is important considering the limited CSR awareness and practices in this region (CLSA, 2014; Ip, 2008).

Board responsibilities are to approve management decisions and provide strategic directions for corporate executives, and to ensure accountability to all stakeholders (OECE, 2004). The role of board has become more complex due to legislative mandates on the board's composition, function and authority (Andrés, Azofra & López, 2005). Additionally, increased attention to nonfinancial risk and opportunity has caused boards to consider issues related to social and environment. A good corporate governance system can prevent managers from making poor social decisions (Xu et al., 2014) and board efficacy is the key to ensure responsible corporate governance and firm performance (Lin et al., 2014). Numerous studies demonstrate that board composition and director background contribute to corporate social performance (e.g. Bear, Noushi & Post, 2010; Beltratti, m 2005; Boulouta, 2013; Fernandez-Feijoo, Romero & Ruiz 2012; Mallen & Michelon, 2011). This paper is an attempt to identify what constitutes a good board of directors in terms of board effectiveness to enhance CSP. The investigation is important because active board engagement ensures ethical leadership on company strategy toward long-term value creation.

This study uses Taiwanese public firms as a sample over the period of 2010-2012 to examine their relationships. We propose four proxies to measure supervisory quality of a board at group level: directors' attendance rate, board meeting frequency, board social capital and board training. Each represents directors' devotion to the board responsibilities. Empirical results indicate that CSR firms exhibit significantly higher attendance rate, board meeting frequency and board social capital than non-CSR firms, implying that board efficacy is critical in promoting corporate social awareness and initiatives. For CSR firms, board attendance rate and board meeting frequency positively impact CSR ratings. However, we find board social capital and board training negatively affect CSR ratings, implying that busy and inexperienced board detriment a firm's social performance. The results are robust after a battery of tests. Overall, the combined results support our expectations that board supervisory

quality is important governance related contextual factor influencing corporate social performance.

Our study makes several contributions to the literature and practice. First, the economic consequences of CSP have been studied extensively. There is little evidence on drivers of CSP (Moser & Martin, 2012). We add to the literature by studying the effects of board supervisions on CSP. Second, tradition academic research focuses on a limited number of quantifiable board characteristics and their impact on CSP. We argue that the soft elements of the board are of equal importance. Mallen and Michelon (2011) document board reputation is an attribute to CSP. We extend this line of research by showing board efficacy are important to achieve CSP, a topic never explored in the literature. Lastly, CSR is gaining importance in Asia, and this trend is expected to continue in the future. As governments in Asian countries have promulgated CSR guidelines and practices on listed firms, our results add an important missing picture to the existing literature: effective board monitoring as a way to ensure ethic leadership.

### **Corporate Social Initiatives in Taiwan**

In the past 20 years, Taiwan has built strong economies as it produced companies with global brands in high-tech consumer goods and others. Despite its standing in the global economy, corporate governance in Taiwan has some way to go to match global standards (CLSA, 2014). Regulators in Taiwan, therefore, are dutifully trying to compel modern governance practices on companies to catch up the trend in global corporate governance best practices. For example, board of directors constitutes the most important instrument in Taiwanese corporate governance (Ip 2008). The performance of a board depends on how all members commit them to their supervisory responsibilities. Thus, the Securities and Exchange Act of Taiwan requires a firm to undertake self-evaluation of board and director performance on an annual basis, and organize training programmers for directors and disclose this information in annual reports, along with the board attendance records of directors. In 2011, all listed firms are required to establish compensation committee for setting executive remuneration policy. In terms of corporate reporting for listed companies, the Taiwanese government has brought its accounting and financial reporting standards closer in line with International Financial Reporting Standards in 2013, and improved non-financial reporting standards. However, very few companies establish audit committee.

As far as CSR is concerned, there are limited practices of corporate social responsibility in the public and private sectors. Government agencies, namely the Department of Investment Services, Industrial Development Bureau of Ministry of Economic Affairs, Financial Supervisory Commission, and Executive Yuan, are said to spare limited effort to encourage enterprises to boost CSR. As for listed firms, Taiwan Stock Exchange and over the counter GreTai Securities Market jointly enacted Corporate Social Responsibility Best Practice Principles for TWSE/GTSM-Listed Companies in August of 2011 which advises listed firms to promulgate their own corporate social responsibility principles in accordance with the OECD Principles to manage their environmental and social risks and impact. Firms are responsible to establish their policies, systems or relevant management protocols for

corporate social responsibility programs, which shall be approved by the board of directors. By 2014, more and more enterprises have issued CSR reports according to GRI standards with few accredited by a third party, i.e., BSI of the United Kingdom, SGS of Taiwan and DNV of Norway.

However, recent high-profile cases of corporate misconduct in Taiwan have resulted in large investor losses and public distrust. In 2011, soft drink makers had used industrial plasticiser as a clouding agent to save cost. In 2013, famous oil companies mixed olive oil with the cheaper cottonseed variety purified with a controlled colouring agent, copper chlorophyllin. The cooking oil scandal is ongoing in 2014 involving a food conglomerate Ting Hsin International Group who are accused of using lard meant for animal feed in their cooking oil products. These incidents have sparked widespread outrage among consumers in Taiwan, leading to a campaign to boycott the group's products and brands. The wave of scandals involved listed firms and raised serious questions on corporate ethos and what can the board do to improve corporate responsibilities.

The Taiwanese government responded to these instances seriously. In 2014, the Taiwan Stock Exchange Corporation (TSEC) and GreTai Securities Market (GTSM) require listed companies with capital more than NT\$10 Billion, or firms in the food finance chemical industries are required to file CPA certified CSR report in GRI format. In total, 233 firms are required to file CSR report beginning in 2014 although 77 of them have voluntarily done so beforehand. However, the establishment of board committee responsible for social and environmental issues is still not mandated. In the practical realm, there is no agency formally rate corporate social related performance except for two magazines awarding 30-50 best corporate citizens in Taiwan. Overall, Corporate Social Responsibility is still on the budding phase. Taiwan is not yet quite mature in CSR accreditation system and leaves plenty of rooms for future development ahead.

## **Literature Review and Hypothesis Development**

### **Board Supervisory Quality**

The role of the board of directors has received a great deal of attention lately for being the apex of the decision-making process (Kassinis and Vafeas, 2006). The role of the board is to ensure the strategic guidance of the company, the effective monitoring of management by the board, and the board's accountability to the company and the shareholders (OECD, 2004). Hence, a responsible board should apply high ethical standards taking into account of the interests of all stakeholders.

The fiduciary duty of a board is to serve as effective stewards of their companies' success. The performance of a board relies on how well each member commits herself to the supervisory responsibility. Directors are expected to be actively involved in assessing and shaping company policies and practices, particularly on issues related to social and environment. However, most directors are busy with competing demands from various tasks. Time constraints prevent them from devoting themselves unselfishly to various board issues. Thus, board efficacy is important to ensure responsible corporate governance.

Traditional academic research focuses mostly on the economic consequences of board-level characteristics, such as board structure and background. For instance, Fama and Jensen (1983) document that outside directors is less likely to engage in value-reducing behaviors. Bear et al. (2010) finds that firms with woman directors achieve higher CSP. Van den Berghe and Levrau (2004) contend that practitioners attach greater importance to soft elements of the board which is rare in the literature. A stream of research has emerged since to study how board conducts affect corporate performance. Ferris et al., (2003) finds that busy directors fail to fulfill board responsibilities. Firms with diligent directors perform better (Lin et al., 2014). Mallin and Michelon (2011) propose that board reputation attributes are important determinants of corporate social performance. It is important to extend this line of research to comprehend the economic consequences of board conduct.

Supervisory quality of board is hard to measure. The literature uses various proxies to appraise. Jiraporn et al., 2009 and Lin et al. (2013) propose board attendance rate as an indication of board efficacy which provoke future performances. Vafeas (1999) argue that board meeting frequency increases when a firm's performance is deteriorating, meaning board meeting frequency could serve as an index of board efforts. Yermack (1996) proposes board size as a measure as he finds the monitoring capacity of larger boards may be outweighed by increased problems of communication and group decision-making, leading to lower firm value. Mallin and Michelon (2011) propose that board composition, competence, diversity, leadership, structure and links to external environment could serve as board reputation attributes.

#### Board Supervisory Quality and Corporate Social Performance

CSR has become a prominent issue for all companies worldwide. CSR is about achieving commercial success in ways that honor ethical values and respect people, communities and environment. CSP represents outcomes of a firm's CSR related operations. The rationale of CSR is justified either by enabling managers to protect firms from external threats or to benefit from external opportunities, which in turn contribute toward firm profitability. The literature provides evidences on future benefits of CSP, including sales (Lev et al., 2010), financing (Dhaliwal et al., 2011) and access to valuable resources (Waddock & Graves, 1997).

The theory provides two perspectives: agency theory and stakeholder theory, for the link between board supervisory quality and CSP. Agency theory (Jensen & Meckling, 1976; Fama & Jensen, 1983) argues that the separation of ownership and control offers the threats of managerial interests overwhelming shareholders' interests. In neoclassical economics' view, CSR initiatives are essentially an added cost to a firm (Dhaliwal et al., 2011). Opportunistic managers may direct a firm's resources towards unprofitable CSR activities (Brammer & Millington, 2008). Agency costs arise when individual managers have preferences for societal benefit but at the expenses of owners (Moser & Martin, 2012). Board monitoring represents a disciplining force within firms. As such, actions can be taken at the board level to balance the degree of managers' discretion to engage in CSR activities at the optimal level. Using 100 Best Corporate Citizens in the U. S., Mallin and Michelon (2011) propose that board reputation attributes are important determinants of corporate social performance. Specifically,

they find that bringing in more independent directors, community influential members, and female directors can effectively enhance corporate social performance. Bear et al. (2010) finds that the number of women on the board has a positive relationship with CSP because of their sensitivity to CSR (Williams, 2003) and participative decision-making styles (Konrad et al., 2008), and these benefits may contribute to enhanced corporate responsibility strength ratings. Additionally, Fernandez-Feijoo et al. (2012) argue that boards with three or more women are more forthcoming in CSR disclosure. The above literature investigates mainly on board composition but ignoring influences from board efficacy.

Stakeholder theory, on the other hand, argues that managers must satisfy a variety of constituents to achieve firm outcomes (Dhaliwal et al., 2011; Friedman, 1970). Thus, organization legitimacy theory supports the view that businesses are bound by the social contract in which the firms agree to perform various socially desired actions appropriate to social norms, values and beliefs, in return for approval of its objectives and continued existence (Suchman, 1995). By doing so, legitimacy helps firms to survive and grow (Dobrev & Gotsopoulos 2010; Ruef & Scott 1998), be more predictable (Bansal & Clelland 2004), and profitable (Dacin et al 2007). Managers will engage in CSR activities that benefit society even when doing so decreases shareholder value (Dhaliwal et al., 2011). Thus, CSP affects the reputation of a firm, which in turn enables a firm to gain social legitimacy. We argue that board efforts are important in lending support to the corporation in understanding and responding to its environmental and social issue. A well-designed corporate system should align managers to engage in CSR activities to improve firm reputation. Hence, corporate board of directors is expected to be actively involved in assessing and shaping company policies and practices on important social and environmental issues. The board is required to exercise due diligence to evaluate management and assess business strategies to ensure firms to expand the set of value-creating exchanges with customers, suppliers, communities and employees to yield returns in the long run.

In sum, both agency and stakeholder theories support our predictions that board supervision is necessary to ensure firms are ethical toward environment and social responsibilities. The relationship between board composition and CSP has been explored extensively. Whether or not board supervisory quality affects a firm's social performance is an empirical question never been explored in the literature. The efficacy of board is hard to measure. By consulting previous literature (e.g. Jiraporn et al., 2009; Lin et al., 2013; Mallin & Michelon, 2011; Vafeas, 1999; Yermack, 1996), this study proposes four proxies to measure board supervisory quality at group level: attendance, meeting frequency, social capital and training, each representing a board's devotion to a firm.

### Board Attendance

Directors exercise their oversight responsibilities mainly in board meetings. Directors who actively involve themselves in board meetings are less likely to have attendance problem (Adams & Ferreira, 2012). Absent in board meetings could be a sign of reduced monitoring quality. The Financial Supervisory Commission, the top regulative body of listed firms in Taiwan, requires firms undertaking self-evaluation of board and director performance on an

annual basis, and disclosing board attendance records of each individual director in company annual report. Therefore, board attendance rate is a good indication of board diligence (Adams & Ferreira, 2012).

Lin et al. (2014) examine the relationships between board attendance and firm value and find that higher board attendance enhances higher firm accounting performance. This verifies that firms could view board attendance rate as an indication of board supervisory quality. This study proposes that the higher board attendance rate, the more likely they are fulfilling monitoring responsibilities in CSR activities.

#### Board Meeting Frequency

Board meetings are critical to a firm's performance (Vafeas, 1999). When a board intends to closely monitor corporate managers, the intensity of board meeting increases (Adams & Ferreira, 2012). Vafeas (1999) finds that the number of board meeting increases following poor performance, and poorly performing firms with higher meeting frequency in subsequent years improve their performance. This study proposes that the higher frequency of board meeting, the higher possibility of board exercises monitoring functions in corporate social behaviors.

#### Board Social Capital

Directors usually hold top executive jobs and other directorships. Multiple tasks enable directors build networks and obtain prudent information. Fich and Shivdasani (2006) argue that the number of directorships is closely linked to directors' social capital. When directors hold multiple directorships, they accumulate bridging ability between firms and outside constituents (Fich & Shivdasani, 2006). Director's social capital offers entities links to external environment through which a firm can gain information, resources and legitimacy (Kim & Cannella, 2008) and these valuable experiences have positive impacts on how directors perform in a board (Loderer & Peyer, 2002; Perry & Peyer, 2005). Kim and Cannella (2008) contend that the aggregate social capital of the board is firm-specific intangible assets, which is critical to a firm's sustainable competitive advantage. It should be noted that multiple directorships may cause directors to become overcommitted on other tasks (Fich & Shivdasani, 2006). Regardless the business effects, this study argues that board-level social capital is positively associated with board effectiveness (Mallin and Michelon, 2011).

#### Board Training

A board should recruit individual directors with competencies and skills. After on board, individual directors should be regularly assessed and that these assessments should consider the applicable position description(s), as well as the competencies and technical ability each individual director is expected to bring to the board. Thus, on-job training is important for directors continuously acquire knowledge and skill necessary to perform. In Taiwan, listed firms are required to undertake self-evaluation of board and director performance on an annual basis, and organize training programmes for all directors. Directors must obtain at least three hours of training and newly appointed directors should attend training program for at least 12 hours per year to gain experiences on company affairs. Article 40 of the Corporate



Social Responsibility Best Practice Principles for TWSE/GTSM listed companies advises members of the board of directors to participate in training courses on finance, risk management, business, commerce, accounting, law or corporate social responsibility. These training are to ensure directors acquire technical ability for ethic leadership.

Overall, the present study predicts that the quality of board supervision is critical to a firm's social awareness in initializing CSR activities. As such, we propose H1 to test their impact.

**H1a:** Board attendance rate positively impacts a firm's CSR initiatives.

**H1b:** Board meeting frequency positively impacts a firm's CSR initiatives.

**H1c:** Board social capital positively impacts a firm's CSR initiatives.

**H1d:** Board training positively impacts a firm's a firm's CSR initiatives.

Using business ethics 100 best U. S. corporate citizens as samples, Mallin and Michelin (2011) claim that board reputation in terms of board composition, competence, diversity, leadership, structure and links with the external environment are associated with CSP. For CSR firms, this study proposes that the supervisory quality of board should have positive impact on a firm's social performance. H2 states:

**H2a:** Board attendance rate positively affects a firm's social rating.

**H2b:** Board meeting frequency positively affects a firm's social rating.

**H2c:** Board social capital positively affects a firm's social rating.

**H2d:** Board training positively affects a firm's social rating.

## **Research Design**

### **Sampling Procedure**

The examined data includes listed firms in Taiwan covering 2010-2012. We begin with a search in CSRHUB database, a global internet CSR rating company, for firms disclosing corporate social information in Taiwan. There are 83 firms in 2010, 129 firms in 2011 and 136 firms in 2012, resulting 363 firm-year samples. We then delete firms lacking board and financial information, leaving 348 firm years. We group these samples as CSR firms and match them with double size non-CSR firms, resulting in 1005 sample firms to test hypotheses H1a-H1d. Non-CSR firms are chosen from the same industry and in the sample year as the CSR firms, limiting to size not more(less) than 40% of the size of these CSR firms.

As to hypothesis H2a-H2d, we use CSR firms to test the relations between board supervisory quality and CSP. Table 1 presents our sample selection results and Table 2 describe sample distribution.

Financial data is from Taiwan Economic Journal (TEJ). The Securities and Exchange Act of Taiwan require listed firms to disclose corporate governance information in their annual reports, including board meetings and attendance rate. For each director under study, we hand

collect their trainings hours and directorship from company annual report. We begin with the names of each director and then match this data with names of other listed firms to calculate multiple directorships.

Table 1. Sample Selection

Firms evaluated in CSRHUB database	363
Firms missing board or financial information	-15
CSR Firms (H2a-H2d)	348
Double size matching firms (NonCSR firms)	657
Total sample(H1a-H1d)	1005

### Models and Variables

This paper uses multiple regressions to analyze the impacts of board supervisory quality on CSP. Two models are in place. Model 1 tests the relationships between various board efficacy measures and corporate social performance. Model 2 adds additional corporate governance variables to control for their potential effects.

$$CSP_{i,t} = \alpha_0 + \alpha_1 ATTEND_{i,t-1} + \alpha_2 MEETINGS_{i,t-1} + \alpha_3 SC_{i,t-1} + \alpha_4 TRAINING_{i,t-1} + \alpha_5 LEV_{i,t-1} + \alpha_6 ROE_{i,t-1} + \alpha_7 SIZE_{i,t-1} + \alpha_8 YEAR + \alpha_9 INDUSTRY + \varepsilon_i \quad (1)$$

$$CSP_{i,t} = \alpha_0 + \alpha_1 ATTEND_{i,t-1} + \alpha_2 MEETINGS_{i,t-1} + \alpha_3 SC_{i,t-1} + \alpha_4 TRAINING_{i,t-1} + \alpha_5 OWNERSHIP_{i,t-1} + \alpha_6 INDBDS_{i,t-1} + \alpha_7 INTERNAL_{i,t-1} + \alpha_8 DUALITY_{i,t-1} + \alpha_9 BSIZE_{i,t-1} + \alpha_{10} LEV_{i,t-1} + \alpha_{11} ROE_{i,t-1} + \alpha_{12} SIZE_{i,t-1} + \alpha_{13} YEAR + \alpha_{14} INDUSTRY + \varepsilon_i \quad (2)$$

Where  $\varepsilon_i$  is an error term

$$CSP \in CSR\_DUM, \quad CSR\_SOCRE$$

**Table 2. Sample Distribution**

CSR Firms				Non-CSR Firms				All Observations			
Industry Code	Industries	No. of Observations	%	Industry Code	Industries	No. of Observations	%	Industry Code	Industries	No. of Observations	%
11	Cement	6	1.72	11	Cement	12	1.83	11	Cement	18	1.79
12	Food	4	1.15	12	Food industry	8	1.29	12	Food	12	1.19
13	Plastic	11	3.16	13	Plastic	22	3.35	13	Plastic	33	3.28
14	Textile	7	2.01	14	Textile	14	2.13	14	Textile	21	2.09
15	Elec Machinery	10	2.87	15	Elec Machinery	20	3.04	15	Elec Machinery	30	2.99
17	Bio&Medical	9	2.59	17	Bio &Medical	18	2.74	17	Bio &Medical	27	2.69
18	Glass &Ceramic	3	0.86	18	Glass &Ceramic	6	0.91	18	Glass &Ceramic	9	0.90
19	Paper and Pulp	1	0.29	19	Paper and Pulp	2	0.30	19	Paper and Pulp	3	0.30
20	Iron and Steel	8	2.30	20	Iron and Steel	16	2.44	20	Iron and Steel	24	2.39
21	Rubber	6	1.72	21	Rubber	12	1.83	21	Rubber	18	1.79
22	Automobile	8	2.30	22	Automobile	6	0.91	22	Automobile	14	1.39
23	Electronics	182	52.30	23	Electronics	364	55.40	23	Electronics	546	54.33
25	Building material and Construction	4	1.15	25	Building material and Construction	8	1.22	25	Building material and Construction	12	1.19
26	Shipping &Trans	16	4.60	26	Shipping & Trans	32	4.87	26	Shipping & Trans	48	4.78
27	Tourism	2	0.59	27	Tourism	4	0.619	27	Tourism	6	0.60
28	Fin and Ins	43	12.36	28	Fin and Ins	57	8.68	28	Fin and Ins	100	9.95
29	Trading	9	2.59	29	Trading	18	2.74	29	Trading	27	2.69
60	Securities	5	1.44	60	Securities	10	1.52	60	Securities	15	1.49
97	Oil and Gas	3	0.86	97	Oil and Gas	6	0.91	97	Oil and Gas	9	0.90
99	Other	11	3.16	99	Other	22	3.35	99	Other	33	3.28
Total		348	100	Total		657	100	Total		1005	100

### Dependent Variables

Corporate Social Performance: Including CSR\_DUM and CSR\_SCORE.

Corporate Social Performance Dummy (*CSR\_DUM*): Dummy variable equals to 1 for CSR

firms, and 0 for Non-CSR firms.

Corporate Social Performance Score (*CSR\_SOCRE*): Log of measures of CSP. Prior studies mostly use measures of CSR ratings from KLD's SOCRATES data base (e.g. Bear et al., 2010, Boulouta, 2013, Mallin and Michelon, 2011, Turban and Greening, 1996). However, very few listed firms in Taiwan are indexed in KLD. This study uses CSRHUB database, a global internet CSR rating company, for suitable measures of corporate social ratings. Firms are rated in four categories: community, employee relations, environment and corporate governance adhering to the Global Reporting Initiative (GRI) G3.1 guidelines. We measure a firm's rating based on the average score obtained in each of the four areas (Mallin & Michelon, 2011).

#### Independent Variables

Board Meeting attendance (*ATTEND*): the average attendance rate for all directors.

Board Meeting Frequency (*MEETINGS*): the number of board meeting in a year.

Board Social Capital (*SC*): Social capital of the board by setting 1 if more than 50% of directors holding multiple directorships of three or more (excluding own firm), and 0 otherwise.

Directors' Training Hours (*TRAINING*): the average training hours for each director by taking total training hours of the board divided by the number of directors

#### Control Variables

This study controls the firm characteristic variables to avoid possible interference with the test results. Leverage (*Lev*) is the ratio of total debt to total asset. ROE (*ROE*) is return on equity. Size (*Size*) is the total sales in logarithm form to deflate scale differences. Additionally, we control for Year Control (*YEAR*): This study uses year as dummy variables to control for year effects (*Year*) and industry effects (*Industry*).

For Model 2, we add in board characteristics to control for their effects on CSP. Directors' Ownership (*OWNSHIP*) is the directors' shareholding at end of the year. Proportion of Independent Directors (*INDBDS*) is the percentage of independent directors on the board. Internal Directors (*INTERNAL*) is the percentage of management holding director seat. *DUALITY* is a dummy variable equals to 1 if CEO is also chairman of the board, 0 otherwise. Size of board (*BSIZE*) is the board size. Table 2 summarizes all variable definitions.

Table 3. Variable Definitions

Dependent V.	Definitions
<i>CSR_DUM</i>	Dummy variable equals to 1 for CSR firms, and 0 otherwise..
<i>CSR_SOCRE</i>	Corporate Social Performance Score ( <i>CSR_SOCRE</i> ):Log of measures of CSP.
Independent V.	
<i>ATTEND</i>	Board meeting attendance; the average attendance rate for all directors.
<i>MEETINGS</i>	Board meeting frequency; the number meetings in a year.
<i>SC</i>	Social Capital; Social capital of the board by setting 1 if more than 50% of directors holding multiple directorships of three or more (excluding own firm), and 0 otherwise.
<i>TRAINING</i>	The average training hours for each director by taking total training hours of the board divided by the number of directors
Corporate Governance Control	
<i>OWNSHIP</i>	Directors' ownership; the directors' shareholding at end of the year.
<i>INDBDS</i>	The percentage of independent directors on the board.
<i>INTERNAL</i>	The percentage of management holding director seat.
<i>DUALITY</i>	Dummy variable equals to 1 if CEO is also chairman of the board, 0 otherwise.
<i>BSIZE</i>	Board size.
Firm Control	
<i>LEV</i>	The ratio of total debt to total asset
<i>ROE</i>	Return on equity
<i>SIZE</i>	Total sales in logarithm form to deflate scale differences.
<i>YEAR</i>	Dummy variables to control for year effects.
<i>INDUSTRY</i>	Dummy variables to control for industry effects.

## Empirical Results

### Descriptive Statistics

Table 4 presents the descriptive statistics for the full sample (n=1005) and differential analysis for the CSR (n=348) and Non-CSR (n=657) subsamples.

For the full sample, the average for *ATTEND* is 91.5% with SD of 0.117. The average for *MEETING* is 8.251 with a SD of 3.648. The average for *SC* is 0.57 with a SD for 0.495, meaning about 57% of firms having half of directors holding multiple director seats. The average training hours for directors is about 4.193 hours.

In terms of firm characteristics, the average debt ratio is about 51.5% and ROE is 0.114. The average for *SIZE* is 23.799. As to corporate governance controls, the average ownership by directors is about 19.8%. The average percentage of independent directors is about 15.4%. About 20% of firms who's CEOs also act as the chairman of the board. As to the size of the board, the average size is about 7.95 members.

Differential Analysis in Table 4 reveals that CSR firms have significantly higher *MEETING*,

SC and TRAIN than Non-CSR firms. As to board characteristics, CSR firms hire significant less internal directors and less CEO duality. CSR firms are significantly larger in size and acquire more debt than Non-CSR firms.

Table 4. Descriptive Statistics and Differential Analysis

N =1005	MEAN	SD	TEST OF DIFFERENCES		
			CSR FIRMS MEAN(SD)	NON-CSR FIRMS MEAN (SD)	T VALUE
<i>CSR_DUM</i>	0.350	0.476	N/A	N/A	N/A
<i>ATTEND</i>	0.815	0.117	0.825(0.109)	0.809(0.120)	0.201
<i>MEETINGS</i>	8.251	3.649	8.651(3.976)	8.042(3.448)	0.016**
<i>SC</i>	0.570	0.495	0.640(0.481)	0.540(0.499)	0.000***
<i>TRAINING</i>	4.193	6.107	4.772(7.600)	3.887(5.125)	0.028**
<i>OWNSHIP</i>	0.198	0.150	0.196(0.144)	0.199(0.154)	0.210
<i>INDBDS</i>	0.154	0.159	0.164(0.167)	0.148(0.155)	0.212
<i>INTERNAL</i>	0.253	0.175	0.255(0.200)	0.253(0.161)	0.000***
<i>DUALITY</i>	0.200	0.396	0.150(0.360)	0.220(0.413)	0.000***
<i>BFSIZE</i>	7.950	2.575	8.300(2.408)	7.770(2.643)	0.568
<i>LEV</i>	0.515	0.203	0.515(0.218)	0.516(0.195)	0.004***
<i>ROE</i>	0.114	0.194	0.136(0.187)	0.102(0.196)	0.435
<i>SIZE</i>	23.799	1.350	24.882(1.338)	23.226(0.943)	0.000***

### Correlation Analysis

For H1, correlation analysis (table omitted) indicates that all of our board supervisory quality proxies: ATTEND, MEETING, SC and TRAINING are significantly related to CSR\_DUM, supporting H1. As to control variables · OWNSHIP, INTERNAL AND DUALITY are significantly but negatively related to CSR\_DUM while ROE and SIZE are positively related to CSR\_DUM. However, for H2 we find only MEETING is significantly related to SCR\_SCORE (table omitted) . More tests are warranted to consider confounding effects from other factors.

### Regression Results

For H1

We apply logistic regression to analyze the relationship between our supervisory quality proxies and CSR\_DUM. Regression results in Table 5 indicate that ATTEND (2.451, p=0.007), MEETING (0.059, p=0.035) and SC (0.610, p=0.003) significantly affect CSR\_DUM, supporting H1a, H1b and H1c respectively. This implies that diligent boards and boards with affluent social capital have higher social awareness. However, we fail to find any significant relationships between TRAINING and CSR\_DUM (-0.008, p=0.733) · H1dis not

supported.

As to firm control · highly leveraged and larger size firms have higher social awareness.

Model(2) adds corporate governance related variables. The results are similar that three of our supervisory quality proxies (ATTEND, MEETING and SC significantly impact SCR\_DUM (2.273, p=0.015; 0.051, p=0.071; 0.586, p=0.005). Again, there is no material association between TRAINING and our CSR\_DUM (-0.013, p=0.578).

As to corporate governance related variables, OWNSHIP (-1.454, p=0.031) and INTERNAL (-1.045, p=0.090) significantly but negatively related to CSR\_DUM, implying that firms with high director ownership or manager directors have lower social awareness. As to firm control, the results are similar to the main tests.

Table 5. Regression Results for H1(Y=CSR\_DUM)

	Model (1)		Model (2)	
Intercept	-50.830 ***	0.000	-51.089 ***	0.000
<i>ATTEND</i>	2.451 ***	0.007	2.273 **	0.015
<i>MEETINGS</i>	0.059 **	0.035	0.051 *	0.071
<i>SC</i>	0.610 ***	0.003	0.586 ***	0.005
<i>TRAINING</i>	-0.008	0.733	-0.013	0.578
<i>OWNSHIP</i>			-1.454 **	0.031
<i>INDBDS</i>			1.066	0.158
<i>INTERNAL</i>			-1.045 *	0.090
<i>DUALITY</i>			-0.139	0.606
<i>BSIZE</i>			-0.052	0.234
<i>LEV</i>	-7.331 ***	0.000	-7.775 ***	0.000
<i>ROE</i>	-0.501	0.390	-0.570	0.358
<i>SIZE</i>	2.150 ***	0.000	2.225 ***	0.000
<i>YEAR</i>	included		included	
<i>INDUSTRY</i>	included		included	
N	1005		1005	
Walds Tests	91.872		91.872	
Significance	0.000 ***		0.000 ***	
NagelkerkeR <sup>2</sup>	0.604		0.613	

\*\*\*, \*\*, and \* represent significance at 1, 5, and 10% levels. Definitions of variables appear in Table 3.

For H2

H2 test the relationships between board supervisory quality and corporate social ratings for CSR firms. Table 6 present regression results. We find that ATTEND (0.107, p=0.037) and MEETING(0.004, p=0.007) significantly impact CSR\_SCORE, implying board diligence in holding and attending meetings can push up corporate social performance. However, the results indicate that SC (-0.022, p=0.042) significantly but negatively impact CSP. When a

board is too busy with multiple directorships, they are less likely to monitor corporate social activities of a firm, H2c is not supported. Surprisingly, TRAINING (-0.002, p=0.015) is also a factor negatively impact CSP. One possible explanation is that regulations in Taiwan require newly appointed directors to obtain much more training hours. The results imply that boards with inexperienced directors are less effective in monitoring corporate social activities.

As to firm control variables, larger and profitable firms have higher social performance

Model (2) adds in corporate governance related variables. The results are similar that ATTEND (0.098, p=0.054) and MEETING (0.004, p=0.006) significantly impact SCR\_SCORE. Again, we find significant but negative association between SC and CSR\_SCORE (-0.022, p=0.043), H2c is not supported. TRAINING also negatively impact CSR\_SCORE (-0.002, p=0.013), H2d is not supported.

As to corporate governance related variables, INTERNAL (-0.111, p=0.090) and DUALITY (-0.026, p=0.090) significantly but negatively related to CSR\_SCORE, meaning that firms with more manager directors or CEO also acting as board chair have lower social performance. As to firm control, the results are similar to the main tests.

Table 6. Regression Results for H2(Y=CSR\_SCORE)

	Model (1)		Model (2)	
Intercept	1.279 ***	0.000	1.324 ***	0.000
<i>ATTEND</i>	0.107 **	0.037	0.098 *	0.054
<i>MEETINGS</i>	0.004 ***	0.007	0.004 ***	0.006
<i>SC</i>	-0.022 **	0.042	-0.022 **	0.043
<i>TRAINING</i>	-0.002 **	0.015	-0.002 **	0.013
<i>OWNSHIP</i>			-0.062	0.161
<i>INDBDS</i>			-0.013	0.713
<i>INTERNAL</i>			-0.111 ***	0.000
<i>DUALITY</i>			-0.026 *	0.090
<i>BFSIZE</i>			-0.003	0.227
<i>LEV</i>	-0.001	0.984	-0.010	0.791
<i>ROE</i>	0.082 ***	0.004	0.077 ***	0.008
<i>SIZE</i>	0.012 **	0.019	0.014 ***	0.006
<i>YEAR</i>	included		included	
<i>INDUSTRY</i>	included		included	
N	348		348	
Adj.R <sup>2</sup>	0.268		0.303	

\*\*\*, \*\*, and \* represent significance at 1, 5, and 10% levels. Definitions of variables appear in Table 3.

### Robustness Tests

This study performs additional tests for robustness. Kim et al. (2014) argue that corporate social performance ratings includes corporate governance dimension. This study eliminates this dimension from our SCP Score and rerun the regression models and Table 7 presents our



results. Similar to our main tests, ATTEND and MEETING are still significantly related to CSR\_Score (0.113,  $p=0.042$ ; 0.004,  $p=0.009$ ) while SC and TRAINING are negatively impact CSR\_SCORE (-0.031,  $p=0.010$ ; -0.002,  $p=0.010$ ).

Table 7. Regression Results for H2-Eliminating CG Factor from CSR-SCORE Measure

	Model(1)		Model(2)	
Intercept	1.247	*** 0.000	1.290	*** 0.000
ATTEND	0.113	** 0.042	0.104	** 0.060
MEETINGS	0.004	*** 0.009	0.005	*** 0.008
SC	-0.031	*** 0.010	-0.031	*** 0.010
TRAINING	-0.002	** 0.011	-0.002	*** 0.010
OWNSHIP			-0.060	0.212
INDBDS			0.017	0.661
INTERNAL			-0.116	*** 0.000
DUALITY			-0.004	0.169
BSIZE			-0.030	* 0.067
LEV	0.004	0.924	-0.006	0.887
ROE	-0.037	*** 0.010	0.088	*** 0.005
SIZE	0.072	*** 0.000	0.015	*** 0.008
YEAR	included		included	
INDUSTRY	included		included	
N	348		348	
<i>Adj.R</i> <sup>2</sup>	0.273		0.307	

\*\*\*, \*\*, and \* represent significance at 1, 5, and 10% levels. Definitions of variables appear in Table 3.

Kim et al. (2012) also indicate that certain industries are more inclined to disclose CSR related information and the inclusion of these industries may alter our results. We thus eliminate firms from chemical, biochemical and automobile industries (Dhaliwal et al., 2012; Kotchen and Moon, 2011), leaving 331 sample firms. The results are similar (Table 8).

Table 8. Regression Results for H2-Eliminating Environmental Sensitive Firms

	Model(1)		Model(2)	
Intercept	1.241 ***	0.000	1.293 ***	0.000
<i>ATTEND</i>	0.111 **	0.033	0.105 **	0.042
<i>MEETINGS</i>	0.006 ***	0.001	0.006 ***	0.002
<i>SC</i>	-0.023 **	0.039	-0.024 **	0.035
<i>TRAINING</i>	-0.002 **	0.014	-0.002 ***	0.011
<i>OWNSHIP</i>			-0.078 **	0.089
<i>INDBDS</i>			-0.029	0.445
<i>INTERNAL</i>			-0.116 ***	0.000
<i>DUALITY</i>			-0.028 *	0.078
<i>BSIZE</i>			-0.003	0.329
<i>LEV</i>	0.004	0.930	-0.006	0.879
<i>ROE</i>	0.090 ***	0.002	0.087 ***	0.003
<i>SIZE</i>	0.012 **	0.018	0.015 ***	0.006
<i>YEAR</i>	included		included	
<i>INDUSTRY</i>	included		included	
N	331		331	
<i>Adj.R<sup>2</sup></i>	0.278		0.315	

\*\*\*, \*\*, and \* represent significance at 1, 5, and 10% levels. Definitions of variables appear in Table 3.

## Discussion and Conclusion

The concept of a board's fiduciary duty has been expanding to include a number of social environmental and human rights issues that may have a material impact on company performance. This study proposes board efficacy as a driving force to promote corporate social performance. The investigation is important considering the relatively low CSR awareness in Asian firms and the increasing social and legislative demands board monitoring on corporate social operations. Using a sample of Taiwanese listed firms, empirical results confirm our expectations. Below summarizes our findings.

### 1. Board supervision quality is critical in promoting corporate social awareness.

H1 tests if board supervision quality is significantly higher for CSR firms comparing to firms not yet taking CSR seriously. We find board attendance rate, meeting frequency and social capital significantly influencing a firm's CSR awareness and initiatives. The results imply that a board should hire directors with social capital and encourage directors dutifully engage in board affairs to promote corporate social awareness.

### 2. Board supervision quality can improve corporate social ratings

H2 tests if improving board supervision quality can indeed enhance corporate social ratings. Among CSR firms, empirical results indicate that attendance rate and meeting frequency positively affects a firm's CSP, implying that board diligence is essential to monitoring management to achieve higher social objectives. However, board social capital and training

significantly but negatively impact CSP, implying busy board and inexperienced board detracts CSP.

CSR has attracted worldwide attention nowadays as it requires firms to conduct business beyond compliance with the law and beyond share holder wealth maximization. Firms nowadays provide not only the quantity of goods, services, and employment but also the quality of life for those whose interests are affected by corporate activities. Together the evidences suggest that board success in CSR means directors must sincerely want to engage and individual directors must be passionate about the issues and champion the board's effort. Additionally, firms that are behind social agenda need to recruit resourceful directors to diversify information base for advises about stakeholder issues and trends. Firms that have taken steps in CSR activities, on the other hand, should not recruit overly busy directors or inexperienced directors. This will ensure total directors' total devotion to company goals and strategies addressing social and environment issues.

### **Managerial and Practical Implications**

Our paper provides both theoretical and practical implications. Theoretically, our findings highlight the need for a better understanding of the soft elements that determines board effectiveness for CSP. Social and environmental considerations are no longer seen as soft areas in conducting businesses. Rather, boards are instrumental in shaping and overseeing such strategies.

The findings of this study have practical implications for boards and investors. First, the role of board is evolving and an effective board ought to position herself in a strong leadership role as to CSR practices and oversight. Second, investors make investment decisions not only based on financial data but also on nonfinancial performance. CSR is one of the critical areas for careful scrutiny. This research provides investors an additional channel when assessing potential investment.

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